

ABSTRACT OF THE DISCLOSURE

5 A semiconductor topography is provided which includes a silicon dioxide layer with a thickness equal to or less than approximately 10 angstroms and a silicon nitride layer arranged upon the silicon dioxide layer. In addition, a method is provided which includes growing an oxide film upon a semiconductor topography in the presence of an ozonated substance and depositing a silicon nitride film upon the oxide film. In some embodiments, the method may include growing the oxide film in a first chamber at a first temperature and transferring the semiconductor topography from the first chamber to a second chamber while the semiconductor topography is exposed to a substantially similar temperature as the first temperature. In either embodiment, the method may be used to form a semiconductor device including an oxide-nitride gate dielectric having an electrical equivalent oxide gate dielectric thickness of less than approximately 20 angstroms.

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